Amendments to the Claims

This listing of claims replaces all prior listing of claims, and listing of claims in the application.

Listing of Claims

1-14. (Cancelled)

15. (Previously Presented) A vaccine formulation suitable for mucosal administration comprising:
(a) a mixture of a first vaccine antigen which is Hepatitis B virus surface antigen (HBsAg), and
(b) a second vaccine antigen which is a viral nucleocapsid or a virus-like particle; wherein said HBsAg has an adjuvant effect on the second vaccine antigen, and wherein said first and second vaccine antigens are each present from 0.001mg to 1mg.

16. (Previously Presented) The vaccine formulation according to claim 15, wherein the viral nucleocapsid is the nucleocapsid antigen of Hepatitis B virus.

17. (Previously Presented) The vaccine formulation according to claim 15, wherein the virus-like particle is the virus-like particle antigen of Human Papilloma virus (HPV).

18. (Previously Presented) The vaccine formulation according to claim 15, wherein the viral nucleocapsid is the nucleocapsid antigen of Hepatitis C virus.

19-20. (Cancelled)

21. (Previously Presented) The vaccine formulation according to claim 15, wherein the vaccine formulation is suitable for nasal administration.

22. (Previously Presented) The vaccine formulation according to claim 15, wherein the vaccine formulation is suitable for use as a therapeutic vaccine against Hepatitis B virus (HBV) infection.

23. (Previously Presented) The vaccine formulation according to claim 15, wherein the vaccine formulation is suitable for use as a preventive vaccine against Hepatitis B virus (HBV) infection.

24. (Cancelled)

25. (Previously Presented) The vaccine formulation according to claim 17, wherein the vaccine formulation is suitable for use as a preventive vaccine against Human Papilloma virus (HPV) infection.

26. (Previously Presented) The vaccine formulation according to claim 18, wherein the vaccine formulation is suitable for use as a therapeutic vaccine against Hepatitis C virus (HCV) infection.

27. (Previously Presented) The vaccine formulation according to claim 17, wherein the vaccine formulation is suitable for use as a therapeutic vaccine against Human Papilloma virus (HPV) infection.

28-37. (Cancelled)

38. (Previously Presented) A vaccine formulation suitable for mucosal administration, comprising:

(a) a mixture of a first vaccine antigen which is Hepatitis B virus surface antigen (HBsAg), and

(b) a second vaccine antigen and a third vaccine antigen,

wherein the vaccine antigens are each present from 0.001mg to 1mg.

39. (Previously Presented) The vaccine formulation according to claim 38, wherein the second vaccine antigen is an antigen of a viral nucleocapsid or a virus-like particle.

40. (Previously Presented) The vaccine formulation according to claim 39, wherein the virus-like particle is the virus-like particle antigen of Human Papilloma Virus (HPV).

41. (Previously Presented) The vaccine formulation according to claim 39, wherein the third vaccine antigen is Hepatitis B virus core antigen (HBcAg).

42. (Currently Amended) A method for administering a vaccine formulation to a mammal for generating an immune response ~~antigen which is a viral nucleocapsid or a virus-like particle~~, the method comprising administering mucosally to the mammal a vaccine formulation comprising:

(a) a mixture of a first vaccine antigen which is Hepatitis B virus surface antigen (HBsAg), and

(b) a second vaccine antigen which is a viral nucleocapsid or a virus-like particle;

wherein said HBsAg has an adjuvant effect on the second vaccine antigen, and wherein said first and second vaccine antigen are each present from 0.001 mg to 1 mg ~~according to claim 15~~.